

## METHOD AND APPARATUS FOR COMPENSATING FOR MOTION PREDICTION

### ABSTRACT OF THE DISCLOSURE

A process burden for code processing is reduced by the  
5 present system and method while possibly avoiding the lowering  
of image quality. When compensating for motion prediction by  
using a multi-reference frame while sequentially changing the  
pixel-based sizes of motion compensating blocks, a size-reduced  
block is generated depending upon a motion compensating block  
10 having the greatest pixel-based size to be taken as the uppermost  
layer among the pixel-based sizes. Thereafter, motion vector  
search ranges are determined respectively within the reference  
frame images, on the basis of a plurality of size-reduced  
reference images reduced in size respectively corresponding to  
15 the size-reduction ratios of the size-reduced blocks and the  
size-reduced blocks. Using the determined search range, an  
optimal motion vector is detected while sequentially changing  
the pixel-based sizes of the motion compensating blocks. This  
can detect a motion vector by only a limited search range within  
20 the reference frame image.